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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,975	03/31/2004	Yingqiu Jiang	REVEO-0084USAADN02	8702

HAS

26665 7590 07/13/2005

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EXAMINER	
PARKER, FREDERICK JOHN	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/814,975	JIANG ET AL.	
	Examiner	Art Unit	
	Frederick J. Parker	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *55-81* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *55-81* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The amendments in response to the Objections to the Specification of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the objections.

Claim Objections

- Claim 72 is objected to because of the following informalities: claim 72, closed parenthesis ") is missing after "presented" on line 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 60,70,80 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-Claims 60,70,80 are vague and indefinite because it is unclear what is meant by a "non-volatile solvent" since all solvents have at least some degree of volatility.

Double Patenting

The previous double patenting rejections are withdrawn in view of amendments which cancelled patentable subject matter. New rejections are necessitated by amendment.

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 55-61,63-71,73-81 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,2,7-10,12,14,20 of U.S. Patent No. 6387457. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant process is the same as that of US'457 except the latter include a specific particle size range, and the instant application is silent on particle size and accordingly includes that of US'457 since selection of particle size for a desired end product or aesthetics is an obvious choice.

The new 35 USC 103 rejections are necessitated by amendment, which follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 55-57,60,61,64,66-67,70-71,74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rapaport US 3093462 in view of Coates WO/9730136.

Rapaport teaches to make decorative plaques by applying adhesive in a desired patterned outline to a substrate and while the adhesive is in a wet/ tacky state, colored granulated material is sprinkled thereon (col. 2, 1-6), and then before drying has occurred, a clear sheet is firmly pressed on the particle-coated designs which necessarily mechanically orient particles (col. 2, 7-12). Such adhesives are inclusive of those with volatile and non-volatile solvents. Utilizing flakes of non-metallic CLC reflecting materials as the granulated material and other means for orienting the flakes substantially with the substrate surface are not taught.

Coates et al teaches using chlorestric polymer flakes (CLC) as effect pigments in coatings comprising a polymer for automotive, cosmetic, and other applications in which the coatings are sufficiently sheared, for example by a doctor blade, applying two substrates together (i.e. mechanical working), or printing to provide preferred orientation/ alignment of the flakes to produce special reflective/ optical properties (p. 22, 10-19 & p. 25, 12-30). Since buffing is mechanical and creates shear, it is the Examiner's position that buffing would have been another obvious choice to create preferred orientation/ alignment of flakes given the teachings of Coates that mechanical shearing creates such phenomenon.

Applicants' claims cite applying a "dry non-metallic refractive (flake) material" to a substrate. Coates applies the flakes already in a fluid binder to the substrate to provide the same effects. However, the application of a binder in both cases is simply to hold the flakes to the substrate,

since simply applying flakes to a substrate would not provide a coating having utility since the flakes would be readily removed or fall off with movement. It is well-established that there is no invention in combining known elements in a way to perform the same function as the prior art without claiming "a particular feature" which has unobvious and unexpected results; In re Rose 105 USPQ 237 & In re Lindberg 93 USPQ 23. In the Application, Applicants simply claim a variation in sequence of steps in a process to form a reflective coating producing results which are effectively the same as that of the prior art, and accordingly the claimed process does not patentably distinguish over the prior art, absent a clear and convincing showing of unobvious and unexpected results to the contrary.

Forming multiple layers to forge a specific thickness or pattern without otherwise changing the outcome would have been obvious variations within the purview of one skilled in the art to produce a desired thickness or aesthetic effect per claim 56.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Rapaport by applying CLC particles using a binder as disclosed by Coates to produce reflective decorative coatings with oriented CLC flakes.

As to claim 64, the selection of index of refraction of clear coat and binder relative to the flake materials would have been obvious variations to achieve specific, desired optical effects and would not patentably distinguish over the prior art. Matters related to the choice of ornamentation producing no mechanical effect or advantage considered to constitute the invention are considered obvious and do not impart patentability, In re Seid 73 USPQ 431.

6. Claims 62-63,72-73,76,77,80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rapaport in view of Coates and further in view of Brown et al.

Rapaport and Coates are cited for the same reasons previously discussed, which are incorporated herein. While pressing particles is disclosed by Rapaport, rolling as an alignment means is not disclosed.

However, Brown teaches on col. 4, 25-28 that rollers 33,34 promotes "a remarkably complete orientation" of glass flakes "in planes parallel with the main surfaces" of a sheet product. Since roller area mechanical shear process, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Rapaport in view of Coates by utilizing rollers taught by Brown et al as the mechanical shear process to orient the particles because of the expectation of producing equivalent reflective decorative coatings with parallel/ oriented pigment flakes. It also would have been obvious to utilize other mechanically shearing means to promote orientation such as buffing because of the expectation of causing greater orientation of platy particles than without buffing.

7. Claims 58-59,68-69,78-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rapaport in view of Coates, in combination or further in view of Brown et al, and further in view of Cairncross et al US 5356751.

Coates, Brown, and Rapaport are cited for the same reasons previously discussed, which are incorporated herein. Printing a radiation curable binder is not cited.

Cairncross teaches a method for applying particles (col. 1, 66-col. 2,2) to non-uniform radiation curable adhesive areas (col. 4, 54-68). Radiation curing necessarily causes fusion and

therefore the adhesive/ binder comprises a fusible material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the method of Rapaport in view of Coates in combination, or further in view of Brown, by utilizing printing means to apply a radiation curable adhesive as taught by Cairncross et al because of the expectation of forming well-bonded reflective decorative coatings with parallel/ oriented pigment flakes.

8. Claims 65,75,81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rapaport in view of Coates, in combination, or further in view of Brown, and further in view of King et al.

Rapaport, Brown, and Coates are cited for the same reasons previously discussed, which are incorporated herein. Protective overcoat is not disclosed.

King et al teaches the use of non-metallic flakes including inorganic mica and polymeric holographic flakes which are attached to/ included in a fusible binder to form decorative, reflective coatings. King teaches to form organic (non-metallic) holographic flake pigments which are formed into a fluid coating composition further comprising a liquid medium and a fusible film-forming polymeric binder to form decorative coatings on, for example, vehicles. A clear protective topcoat is subsequently applied to the coated surface (col. 8, 38-68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rapaport in view of Coates in combination, or further in view of Brown, by providing a clearcoat on the decorative coat as disclosed by King to provide protection to the decorative coat layer.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frederick J. Parker
Primary Examiner
Art Unit 1762

Fjp